AMENDMENTS TO THE CLAIMS

1. (Currently amended)A method for transporting an enhancer molecule to a target site in a body, comprising:

introducing into the body a polycation bioconjugate which comprises

one or more carrier molecules having free α-amino groups, and the enhancer molecule, wherein the polycation bioconjugate has the general formula (I)

$$H[HN\text{-}CH_2\text{-}(CH_2)_m\text{-}CH\text{-}CO]_rOH \qquad (I)$$

$$|$$

$$[(i)Mx] * [(k)Mx] - NH$$

wherein

"r" is a mean value between 20 and 400 that designates the number of diaminomonocarbonic acyl group monomers;

"m" = 0, 1, 2, 3, . . . ;

[(k)Mx] designates enhancer molecules linked by covalent (=k) bonds to a carrier molecule;

[(i)Mx] designates enhancer molecules linked by ionic (=i) bonds to a carrier molecule, wherein the Mx functional groups may be the same or different, and the enhancer molecules can be linked directly and/or indirectly, through a connecting molecule, to the carrier molecule, and wherein when both [(k)Mx] and [(i)Mx] occur within the same polycation bioconjugate [(i)Mx] * [(k)Mx] is symbolized by [(k/i)Mx];

the carrier molecules are of the same configuration (either D- or L-), and the individual monomers are not linked together by their amino groups in the α-positions, and are linked together by amino groups in other positions according to the value of m, wherein the carrier molecules have a general formula (I/a):

$$H[HN\text{-}CH_2\text{-}(CH_2)_m\text{-}CH\text{-}CO]_rOH \qquad (I/a)$$

$$|$$

$$NH_2$$

(free α-amino group);

and wherein the enhancer molecule ~~has~~ is a compound having an affinity ~~for the target site~~to a receptor or molecule characteristic of the target site, wherein the receptor or molecule is present on a surface of the target site.

2. (Original)The method of claim 1, wherein the enhancer molecule is selected from the group consisting of an antiproliferative compound, an antiviral compound, an antibacterial compound, an antimycotical compound, an antiprotozooneal compound, a nucleic acid, an antisense oligonucleotide, a paramagnetic metal ion, a complex containing a paramagnetic metal ion, an immunomodulant compound, an antibody and fragments and derivatives thereof, a peptide and fragments and derivatives thereof, a protein, including glycoproteins and lipoproteins, and fragments and derivatives thereof, and a hormone and fragments and derivatives thereof.

3. (Original)The method of claim 1, wherein the enhancer molecule is a monoclonal antibody having an affinity to a surface antigen of a tumor cell.

4. (Currently amended)The method of claim 1, ~~wherein the enhancer molecule is a compound having an affinity to a receptor or molecule characteristic of the target site,~~ wherein the receptor or molecule is present in a greater ratio on a surface of a tumor cell than on a surface of a non-tumor cell.

5. (Original)The method of claim 2, wherein the enhancer molecule is an antiproliferative compound that provides a direct or an indirect antiproliferative effect.

6. (Original)The method of claim 5, wherein the antiproliferative compound is selected from the group consisting of cytostatics, cytokines, angiostatins, endostatins, antibodies and fragments and derivatives thereof, hormones and fragments and derivatives thereof, and hormone antagonists and fragments and derivatives thereof.

7. (Original)The method of claim 2, wherein the enhancer molecule is a nucleic acid or an antisense oligonucleotide.

8. (Original)A method for transporting an enhancer molecule to a tumor cell in a body, comprising:

introducing into the body a polycation bioconjugate which comprises

one or more carrier molecules having free α-amino groups, and the enhancer molecule, wherein the polycation bioconjugate has the general formula (I)

$$H[HN\text{-}CH_2\text{-}(CH_2)_m\text{-}CH\text{-}CO]_rOH \qquad (I)$$

$$|$$

$$[(i)Mx] * [(k)Mx] - NH$$

wherein

"r" is a mean value between 20 and 400 that designates the number of diaminomonocarbonic acyl group monomers;

"m" = 0, 1, 2, 3, . . . ;

[(k)Mx] designates enhancer molecules linked by covalent (=k) bonds to a carrier molecule;

[(i)Mx] designates enhancer molecules linked by ionic (=i) bonds to a carrier molecule, wherein the Mx functional groups may be the same or different, and the enhancer molecules can be linked directly and/or indirectly, through a connecting molecule, to the carrier molecule, and wherein when both [(k)Mx] and [(i)Mx] occur within the same polycation bioconjugate [(i)Mx] * [(k)Mx] is symbolized by [(k/i)Mx];

the carrier molecules are of the same configuration (either D- or L-), and the individual monomers are not linked together by their amino groups in the α-positions, and are linked together by amino groups in other positions according to the value of m, wherein the carrier molecules have a general formula (I/a):

$$H[HN\text{-}CH_2\text{-}(CH_2)_m\text{-}CH\text{-}CO]_rOH \qquad (I/a)$$

$$|$$

$$NH_2$$

(free α-amino group);

and wherein the enhancer molecule is a compound having an affinity to a receptor or molecule characteristic of the tumor cell, wherein the receptor or molecule is present on a surface of the tumor cell.

9. (Original)The method of claim 8, wherein the compound is a monoclonal antibody.

10. (Original)The method of claim 9, wherein the receptor is an antigen.

11. (Original)The method of claim 8, wherein the receptor or molecule is present in a greater ratio on the surface of the tumor cell than on a surface of a non-tumor cell.

12. (Original)A polycation bioconjugate suitable for use in transporting an enhancer molecule to a tumor cell, comprising:

one or more carrier molecules having free α-amino groups, and the enhancer molecule, wherein the polycation bioconjugate has the general formula (I)

$$H[HN\text{-}CH_2\text{-}(CH_2)_m\text{-}CH\text{-}CO]_rOH \qquad (I)$$
$$|$$
$$[(i)Mx] * [(k)Mx] - NH$$

wherein

"r" is a mean value between 20 and 400 that designates the number of diaminomonocarbonic acyl group monomers;

"m" = 0, 1, 2, 3, . . . ;

[(k)Mx] designates enhancer molecules linked by covalent (=k) bonds to a carrier molecule;

[(i)Mx] designates enhancer molecules linked by ionic (=i) bonds to a carrier molecule, wherein the Mx functional groups may be the same or different, and the enhancer molecules can be linked directly and/or indirectly, through a connecting molecule, to the carrier molecule, and wherein when both [(k)Mx] and [(i)Mx] occur within the same polycation bioconjugate [(i)Mx] * [(k)Mx] is symbolized by [(k/i)Mx];

the carrier molecules are of the same configuration (either D- or L-), and the individual monomers are not linked together by their amino groups in the α-positions, and are linked together by amino groups in other positions according to the value of m, wherein the carrier molecules have a general formula (I/a):

$$H[HN\text{-}CH_2\text{-}(CH_2)_m\text{-}CH\text{-}CO]_rOH \qquad (I/a)$$
$$|$$
$$NH_2$$
(free α-amino group);

and wherein the enhancer molecule is a compound having an affinity to a receptor or molecule characteristic of the tumor cell, wherein the receptor or molecule is present on a surface of the tumor cell.

13. (Original)The polycation bioconjugate of claim 12, wherein the enhancer molecule is a monoclonal antibody.

14. (Original)The polycation bioconjugate of claim 13, wherein the receptor is an antigen.

15. (Original)The polycation bioconjugate of claim 12, wherein the receptor or molecule is present in a greater ratio on the surface of the tumor cell than on a surface of a non-tumor cell.

16. (New) A method for transporting an enhancer molecule to a target site in a body, comprising:

introducing into the body a polycation bioconjugate which comprises

one or more carrier molecules having free α-amino groups, and the enhancer molecule, wherein the polycation bioconjugate has the general formula (I)

$$H[HN\text{-}CH_2\text{-}(CH_2)_m\text{-}CH\text{-}CO]_rOH \qquad (I)$$
$$\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\quad |$$
$$[(i)Mx] * [(k)Mx] - NH$$

wherein

"r" is a mean value between 20 and 400 that designates the number of diaminomonocarbonic acyl group monomers;

"m" = 0, 1, 2, 3, . . . ;

[(k)Mx] designates enhancer molecules linked by covalent (=k) bonds to a carrier molecule;

[(i)Mx] designates enhancer molecules linked by ionic (=i) bonds to a carrier molecule, wherein the Mx functional groups may be the same or different, and the enhancer molecules can be linked directly and/or indirectly, through a connecting molecule, to the carrier molecule, and wherein when both [(k)Mx] and [(i)Mx] occur within the same polycation bioconjugate [(i)Mx] * [(k)Mx] is symbolized by [(k/i)Mx];

the carrier molecules are of the same configuration (either D- or L-), and the individual monomers are not linked together by their amino groups in the α-positions, and are linked together by amino groups in other positions according to the value of m, wherein the carrier molecules have a general formula (I/a):

$$H[HN\text{-}CH_2\text{-}(CH_2)_m\text{-}\underset{\displaystyle NH_2}{\underset{|}{CH}}\text{-}CO]_rOH \qquad (I/a)$$

(free α-amino group);

and wherein the enhancer molecule has an affinity for the target site; and wherein

"p1" indicates a degree of saturation in % of a carrier molecule of general formula (I/a) with $[Ex_i]$ enhancer molecules, wherein the Ex enhancer molecules of different ("x") kind are conjugated directly to a given representative of carrier molecules of general formula (I/a) by covalent bonds;

"p2" indicates a degree of saturation in % of a carrier molecule of general formula (I/a) with connecting molecules of exclusively anionic character; and

"p3" indicates a degree of saturation % of a carrier molecule of general formula (I/a) with enhancer molecules that are bound to connecting molecules, wherein "p1"+"p2"+"p3">0 and ≤100, and at least two of "p1," "p2" and "p3" are greater than 0.

17. (New)The method of claim 16, wherein the enhancer molecule is selected from the group consisting of an antiproliferative compound, an antiviral compound, an antibacterial compound, an antimycotical compound, an antiprotozooneal compound, a nucleic acid, an antisense oligonucleotide, a paramagnetic metal ion, a complex containing a paramagnetic metal ion, an immunomodulant compound, an antibody and fragments and derivatives thereof, a peptide and fragments and derivatives thereof, a protein, including glycoproteins and lipoproteins, and fragments and derivatives thereof, and a hormone and fragments and derivatives thereof.

18. (New)The method of claim 16, wherein the enhancer molecule is a monoclonal antibody having an affinity to a surface antigen of a tumor cell.